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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,716	01/16/2004	Joy Sawyer Bloom	AD6950USNA	6558

23906 7590 11/16/2006

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EXAMINER	
WOLLSCHLAGER, JEFFREY MICHAEL	
ART UNIT	**PAPER NUMBER**
1732	

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/758,716	BLOOM ET AL.	
	Examiner	Art Unit	
	Jeff Wollschlager	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) *2-4* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment to the specification filed September 5, 2006 has been entered. Claims 1-4 are pending. Claims 2-4 remain withdrawn from further consideration as being drawn to a non-elected invention. Claim 1 is currently under examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Eckhardt et al. (U.S. Patent 4,835,243; issued May 30, 1989).

Claim 1 is directed to a method for forming an isotropic thermotropic liquid crystalline part comprising optionally forming a molding composition of a powdered thermotropic liquid crystalline polymer and optionally one or more powdered resins and/or fillers, placing the molding composition into a mold or molding device, applying pressure and heat to melt the thermotropic liquid crystalline polymer and cooling the mold or molding device to solidify the polymer to form a solid part.

As defined in the specification, the part is deemed to be isotropic if the ratio of the coefficients of thermal expansion in two directions is about 0.60 to 1.0 when the

smaller of the two values is placed in the numerator (U.S. Patent Application Publication 2005/0082720; paragraph [0023]). As further defined in the specification, an isotropic part is achieved under molding conditions that result in little or no flow of the molten polymer, such as in compression molding (paragraph [0002]).

Eckhardt et al. teach a method for forming an isotropic part from a powdered (col. 4, line 40) thermotropic liquid crystalline polymer (col. 1, lines 14-16) utilizing the method of compression molding (col. 4, lines 62-64). Eckhardt et al. do not explicitly disclose that their improved method yields an isotropic part, however, as acknowledged by the applicant in the instant disclosure, isotropic parts are achieved when thermotropic liquid crystalline polymers are compression molded. Further, the method of compression molding inherently involves placing the molding composition into a mold, applying pressure and heat to melt the polymer, and cooling the mold to solidify the polymer to form a solid part. As such, Eckhardt et al. anticipate the claim.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kock et al. (EP 0 239 036; published September 30, 1987).

Claim 1 is directed to a method for forming an isotropic thermotropic liquid crystalline part comprising optionally forming a molding composition of a powdered thermotropic liquid crystalline polymer and optionally one or more powdered resins and/or fillers, placing the molding composition into a mold or molding device, applying pressure and heat to melt the thermotropic liquid crystalline polymer and cooling the mold or molding device to solidify the polymer to form a solid part.

As defined in the specification, the part is deemed to be isotropic if the ratio of the coefficients of thermal expansion in two directions is about 0.60 to 1.0 when the smaller of the two values is placed in the numerator (U.S. Patent Application Publication 2005/0082720; paragraph [0023]).

Kock et al. teach a method for producing molded structures from liquid crystalline polymers by an injection embossing process. Kock et al. employ a thermotropic liquid crystalline polymer (page 2, paragraph 2) to produce a largely isotropic molded structure (page 2, paragraph 4). In the method, the polymer is heated (page 2, paragraph 8) to melt the polymer, pressurized and ultimately cooled to solidify the part (page 2, paragraph 9). This method yields an isotropic part (page 4, second full paragraph and Table 1). It is noted that in addition to the injection embossing method taught by Kock et al. the well-known method of injection molding, as quantified in Table 1, also appears to produce an isotropic part in accord with the definition provided in the instant application (1/1.28 = 0.78).

Response to Arguments

Applicant's arguments filed September 5, 2006 have been fully considered but they are not persuasive.

Applicant's arguments appear to be on the following grounds:

1. Eckhardt et al. do not anticipate the claim because they, "make no attempt to use a high viscosity melt or reduce shear forces" where "applicant's method involves

heating the polymer to a temperature just above its melting point in order to obtain a viscous, homogeneous melt".

2. Kock et al. do not place a powder composition into a mold and the citation to an isotropic molded part was not found in the reference at page 2, paragraph 9.

Applicant's arguments are not persuasive for the following reasons:

1. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. heating the polymer to a temperature just above its melting point in order to obtain a viscous, homogeneous melt) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As such, Eckhardt et al. practice the same claimed process with the same claimed materials. Therefore, Eckhardt et al. necessarily realize the same claimed effects and physical properties.

2. Placing a powder composition into a mold is interpreted as an optional step in accord with the optional language recited in the claim. The claim clearly requires a molding composition, but it is not currently limited to a powder composition. As to the citation to a "wrong paragraph" in the reference, the citation to an isotropic molded part in the original rejection and restated above is found at: page 4, second full paragraph and Table 1.

Conclusion

Claim 1 is rejected.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1732

November 3, 2006

CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER
11/1/06